SEQUENCE LISTING

```
<110> Shaughnessy, S.
      Austin, R.
<120> OSTEOPOROSIS TREATMENT
<130> MDSP-P04-180
<140> to be assigned <141> 2004-2-17
<150> PCT/CA99/00516
<151> 1999-05-19
<150> US 09/715,838
<151> 2000-11-17
<160> 13
<170> PatentIn version 3.1
<210> 1
<211> 20
<212> PRT
<213> Homo sapiens
<400> 1
Arg Arg Leu Arg Ala Ser Trp Thr Tyr Pro Ala Ser Trp Pro Cys Gln
                                    10
Pro His Phe Leu
           20
<210> 2
<211> 20
<212> PRT
<213> Homo sapiens
<400> 2
Thr Tyr Pro Ala Ser Trp Pro Cys Gln Pro His Phe Leu Leu Lys Phe
Arg Leu Gln Tyr
<210> 3
<211> 1140
<212> DNA
<213> Mus musculus
<220>
<221> CDS
<222> (1)..(1140)
<223>
<400> 3
```

atg agc agc tgc tca ggg ctg acc agg gtc ctg gtg gcc gtg gct

Met Ser Ser Cys Ser Gly Leu Thr Arg Val Leu Val Ala Val Ala

| acg Thr | gcc Ala | ctg Leu | gtg Val 20 | tct Ser | tcc Ser | tcc Ser | tcc Ser | ccc Pro 25 | tgc Cys | ccc Pro | caa Gln | gct Ala | tcc Ser 30 | ggt Gly | cct Pro | 96 |
|------------|------------|------------|------------------|------------|-------------------|------------|------------|------------------|------------|------------|------------|------------|------------------|------------|------------|-----|
| | | - | _ | | gga Gly | | | | | | | _ | _ | _ | _ | 144 |
| | | | | | 999 Gly | | | | | | | | | | | 192 |
| | | _ | | _ | gga Gly 70 | | _ | | | | | | | _ | | 240 |
| | | | | | agc Ser | | | | | | | | | | | 288 |
| | | | | | ggg Gly | | | | | | | | | | | 336 |
| | | | | | gtc Val | | | | | | | | | | | 384 |
| | _ | | | _ | cca Pro | | _ | _ | _ | | _ | | | - | | 432 |
| | | | | | aag Lys 150 | | | | | | | | | | | 480 |
| | | | | | ggg Gly | | | | | | | | | | | 528 |
| | | | | | gtc Val | | | | | | | | | | | 576 |
| | | | | | gtg Val | | | | | | | | | | | 624 |
| | | | | | agc Ser | | | | | | | | | | | 672 |
| | | _ | | _ | cct Pro 230 | _ | | _ | _ | _ | _ | | _ | _ | | 720 |
| | | | | | tgg Trp | | | | | | | | | | | 768 |

| cgg ttg caa tac cga cca gca cag cat cca gcg tgg tcc acg gtg gag Arg Leu Gln Tyr Arg Pro Ala Gln His Pro Ala Trp Ser Thr Val Glu 260 265 270 | 816 |
|---|------|
| ccc att ggc ttg gag gaa gtg ata aca gat gct gtg gct ggg ctg cca Pro Ile Gly Leu Glu Glu Val Ile Thr Asp Ala Val Ala Gly Leu Pro 275 280 285 | 864 |
| cac gcg gta cga gtc agt gcc agg gac ttt ctg gat gct ggc acc tgg His Ala Val Arg Val Ser Ala Arg Asp Phe Leu Asp Ala Gly Thr Trp 290 295 300 | 912 |
| agc gcc tgg agc cca gag gcc tgg ggt act cct agc act ggt ccc ctg Ser Ala Trp Ser Pro Glu Ala Trp Gly Thr Pro Ser Thr Gly Pro Leu 305 310 315 320 | 960 |
| cag gat gag ata cct gat tgg agc cag gga cac gga cag cag cta gag Gln Asp Glu Ile Pro Asp Trp Ser Gln Gly His Gly Gln Gln Leu Glu 325 330 335 | 1008 |
| gca gta gta gct cag gag gac agc ccg gct cct gca agg cct tcc ttg Ala Val Val Ala Gln Glu Asp Ser Pro Ala Pro Ala Arg Pro Ser Leu 340 345 350 | 1056 |
| cag ccg gac cca agg cca ctt gat cac agg gat ccc ttg gag caa ctg Gln Pro Asp Pro Arg Pro Leu Asp His Arg Asp Pro Leu Glu Gln Leu 355 360 365 | 1104 |
| gtg cca cgc ggt tct cac cac cac cac cac cac tga Val Pro Arg Gly Ser His His His His His His 370 375 | 1140 |
| | |
| <210> 4 <211> 10 <212> PRT <213> Homo sapiens | |
| <211> 10 <212> PRT <213> Homo sapiens <400> 4 Gly Asp Val Ala Asp Leu Pro Tyr Ala Leu | |
| <211> 10 <212> PRT <213> Homo sapiens <400> 4 | |
| <pre><211> 10 <212> PRT <213> Homo sapiens <400> 4 Gly Asp Val Ala Asp Leu Pro Tyr Ala Leu 1</pre> | |
| <pre><211> 10 <212> PRT <213> Homo sapiens <400> 4 Gly Asp Val Ala Asp Leu Pro Tyr Ala Leu 1</pre> | |
| <pre><211> 10 <212> PRT <213> Homo sapiens <400> 4 Gly Asp Val Ala Asp Leu Pro Tyr Ala Leu 1</pre> | |
| <pre><211> 10 <212> PRT <213> Homo sapiens <400> 4 Gly Asp Val Ala Asp Leu Pro Tyr Ala Leu 1</pre> | |
| <pre><211> 10 <212> PRT <213> Homo sapiens <400> 4 Gly Asp Val Ala Asp Leu Pro Tyr Ala Leu 1</pre> | |

```
<210> 7
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> IL-11 receptor antagonist
<220>
<221> MISC_FEATURE
<222> (4)..(4)
<223> Xaa=basic amino acid
<400> 7
Arg Arg Leu Xaa Ala Ser Trp
<210> 8
<211> 20
<212> PRT
<213> Mus musculus
<400> 8
Ser Ile Leu Arg Pro Asp Pro Pro Gln Gly Leu Arg Val Glu Ser Val
Pro Ser Tyr Pro
            20
<210> 9
<211> 20
<212> PRT
<213> Artificial Sequence
<220>
<223> Il-11 receptor antagonist
<220>
<221> MISC FEATURE
<222> (18)..(18)
<223> Xaa=suitable amino acid
<400> 9
Ser Ile Leu Arg Pro Asp Pro Pro Gln Gly Leu Arg Val Glu Ser Val
                                   10
Pro Xaa Tyr Pro
           20
<210> 10
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> IL-11 receptor antagonist
```

Arg Arg Leu His Ala Ser Trp 1 5

<210> 11

<211> 379

<212> PRT

<213> Mus musculus

<400> 11

Met Ser Ser Ser Cys Ser Gly Leu Thr Arg Val Leu Val Ala Val Ala 1 5 10 15

Thr Ala Leu Val Ser Ser Ser Pro Cys Pro Gln Ala Ser Gly Pro 20 25 30

Pro Gly Val Gln Tyr Gly Gln Pro Gly Arg Pro Val Met Leu Cys Cys 35 40 45

Pro Gly Val Ser Ala Gly Thr Pro Val Ser Trp Phe Arg Asp Gly Asp 50 55 60

Ser Arg Leu Clu Gln Gly Pro Asp Ser Gly Leu Gly His Lys Leu Val 65 70 75 80

Leu Ala Gln Val Asp Ser Pro Asp Glu Gly Thr Tyr Val Cys Gln Thr 85 90 95

Leu Asp Gly Val Ser Gly Gly Met Val Thr Leu Lys Leu Gly Phe Pro 100 105 110

Pro Ala Arg Pro Glu Val Ser Cys Gln Ala Val Asp Tyr Glu Asn Phe 115 120 125

Ser Cys Thr Trp Ser Pro Gly Gln Val Ser Gly Leu Pro Thr Arg Tyr 130 135 140

Leu Thr Ser Tyr Arg Lys Lys Thr Leu Pro Gly Ala Glu Ser Gln Arg 145 150 155 160

Glu Ser Pro Ser Thr Gly Pro Trp Pro Cys Pro Gln Asp Pro Leu Glu 165 170 175

Ala Ser Arg Cys Val Val His Gly Ala Glu Phe Trp Ser Glu Tyr Arg 180 185 190

Ile Asn Val Thr Glu Val Asn Pro Leu Gly Ala Ser Thr Cys Leu Leu 195 200 205

Asp Val Arg Leu Gln Ser Ile Leu Arg Pro Asp Pro Pro Gln Gly Leu 210 215 220

Arg Val Glu Ser Val Pro Ser Tyr Pro Arg Arg Leu His Ala Ser Trp
225 230 235 240

Thr Tyr Pro Ala Ser Trp Arg Arg Gln Pro His Phe Leu Leu Lys Phe 245 250 255

Arg Leu Gln Tyr Arg Pro Ala Gln His Pro Ala Trp Ser Thr Val Glu 260 265 270 Pro Ile Gly Leu Glu Glu Val Ile Thr Asp Ala Val Ala Gly Leu Pro 275 280

His Ala Val Arg Val Ser Ala Arg Asp Phe Leu Asp Ala Gly Thr Trp

Ser Ala Trp Ser Pro Glu Ala Trp Gly Thr Pro Ser Thr Gly Pro Leu 310

Gln Asp Glu Ile Pro Asp Trp Ser Gln Gly His Gly Gln Gln Leu Glu

Ala Val Val Ala Gln Glu Asp Ser Pro Ala Pro Ala Arg Pro Ser Leu 345

Gln Pro Asp Pro Arg Pro Leu Asp His Arg Asp Pro Leu Glu Gln Leu 360

Val Pro Arg Gly Ser His His His His His 375 370

<210> 12

<211> 10

<212> PRT

<213> Homo sapiens

<400> 12

Asp Ala Val Ala Gly Leu Pro His Ala Val

<210> 13 <211> 16 <212> PRT

<213> Artificial Sequence

<220>

<223> Peptide linker

Gly Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser 5